

Ferrule With Relief To Reduce Galling

Abstract

High localized loading, galling, and high torque forces have been generally eliminated or greatly reduced in a two ferrule tube fitting assembly through suitable modification of the rear ferrule so as to redirect the reaction forces acting between the front ferrule and the drive nut. The rear ferrule has a cylindrical interior wall that closely surrounds the tube end and is provided on the interior cylindrical wall with a circumferentially continuous radial recess that is located between the nose and rear wall of the rear ferrule. The rear ferrule also has a radially external wall that is substantially conical and additionally shaped to extend radially outward toward the enlarged diameter portion or flange of the rear ferrule. The rear ferrule further includes a contoured face on the rear driven surface of the ferrule that engages the drive surface of the drive nut.